

tem. The transfusion of blood during surgery was associated with increased risk of wound infection (OR 1.92-3.82,  $p=0.02$ ), post-operative complications (OR 2.63,  $p<0.001$ ) and increased mortality (OR 1.6-10.2,  $p<0.05$ ). Peri-operative blood transfusion was also associated with an increased hospital stay of 4.1 days in Hong Kong, equating to approximately US\$4300 in excess hospital expenses. **CONCLUSIONS:** This review has identified several areas in which peri-operative bleeding may increase the burden to the Hong Kong health care system. This includes the greater need for transfusions, risk of complications and extended hospital stay. Accordingly, improvements in haemostasis have the potential to reduce direct health care resource utilisation through a reduction in blood use, hospital length of stay, need for additional procedures and patient mortality.

#### PSY14

##### COST-EFFECTIVENESS ANALYSIS OF PREGABALIN IN THE TREATMENT OF FIBROMYALGIA

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**OBJECTIVES:** Fibromyalgia is a neuropathic syndrome which is more common in adult females. Pregabalin is the first medicine which was approved by FDA for treatment of fibromyalgia. In this study we aim to evaluate the cost-effectiveness of pregabalin in the treatment of fibromyalgia in Iran. **METHODS:** To evaluate the efficacy of pregabalin, a systematic review by searching on PubMed, Scopus and Google scholar was conducted. The keywords included "fibromyalgia" and "pregabalin". The outcome of interest in the reports was the score pain. To evaluate costs of treatment, the direct costs were considered. **RESULTS:** Out of 8994 primary reports only three reports were included in the study which all of them were Randomized Clinical Trial with placebo control. Considering the efficacy extracted from the reports, the ICER for each treatment doses was calculated. In pregabalin 450 mg/day, the ICER for domestic generic medicine was 0.72 dollar per day per pain score reduction and for imported brand (Lyrica) was 6.47 dollar per day per pain score reduction and for pregabalin 600 mg/day these results were 0.78 and 5.53 respectively. **CONCLUSIONS:** Our analysis indicated that pregabalin in the treatment doses of 300, 450, 600 mg/day is cost-effective and could be included into insurance positive list.

#### PSY15

##### EFFECTIVENESS OF FRESH FROZEN PLASMA AND ITS COST-EFFECTIVENESS IN IRANIAN ACUTE ORGANOPHOSPHATE POISONING PATIENTS

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**OBJECTIVES:** Conventional treatment of organophosphate (OP) poisoning with oximes has had limited success. Fresh frozen plasma (FFP), acting as a bioscavenger to clean up free OP has been recently proposed as a treatment. In this study, we undertook a meta-analysis to evaluate the efficacy of FFP in management of OP poisoning to explore if this bioscavenger therapy can be effective and cost saving in health system or not. **METHODS:** All relevant databases were searched (till February 2012) for all clinical effects of FFP in OP poisoning. The inclusion criteria were death, development of intermediate syndrome, need for ventilation, and adverse effects. Cost data were collected from standard cost list. Cost-effectiveness grid of adding on FFP was calculated per consequence and compared with the conventional regimen. **RESULTS:** A total of 3 studies and 157 patients were included in the meta-analysis. Overall, we did not find significant effectiveness for FFP to prevent death (RR 1.01, 95% CI 0.32-3.4) or intermediate syndrome (RR 0.67, 95% CI 0.04-12.39). Since FFP in Iran is provided free of charge, the  $\Delta$  cost is zero. Considering direct cost and clinically important differences between effectiveness of FFP supplementing and conventional therapy ( $\Delta$  effectiveness (for avoiding intermediate syndrome) = 7), however economics evaluations is not necessary according to cost-effectiveness grid but it could be considered dominate. **CONCLUSIONS:** Results do not support significant efficacy of FFP in reduction of death or intermediate syndrome in patients with OP poisoning. FFP use, however, has no impact in health cost; by consideration of only direct costs; the possibility of its benefit in lowering rate of intermediate syndrome in terms of productivity loss and indirect cost should be considered in future studies.

#### PSY16

##### COST UTILITY ANALYSIS OF REDUCED INTENSITY HEMATOPOIETIC STEM CELL TRANSPLANTATION IN ADOLESCENCE AND YOUNG ADULT WITH SEVERE THALASSEMIA COMPARED TO HYPERTRANSFUSION AND IRON CHELATION PROGRAM

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**OBJECTIVES:** Bone Marrow transplantation is the only therapeutic option that can cure thalassemia disease. Reduced intensity hematopoietic stem cell transplantation (RI-HSCT) has demonstrated a high cure rate with minimal complications compared to other options. Because RI-HSCT is very costly, economic justification for its value is needed. This study aimed to estimate the cost-utility of RI-HSCT compared with blood transfusions combined with iron chelating therapy (BT-ICT) for adolescent and young adult with severe thalassemia in Thailand. **METHODS:** A Markov model was used to estimate the relevant costs and health outcomes over the patients' lifetimes using a societal perspective. All future costs and outcomes were discounted at a rate of 3% per annum. The efficacy of RI-HSCT was based a

clinical trial including a total of 18 thalassemia patients. Utility values were derived directly from all patients using EQ-5D and SF-6D. Primary outcomes of interest were lifetime costs, quality adjusted life-years (QALYs) gained, and the incremental cost-effectiveness ratio (ICER) in Thai baht (THB) per QALY gained. One-way and probabilistic sensitivity analyses (PSA) were conducted to investigate the effect of parameter uncertainty. **RESULTS:** In base case analysis, the RI-HSCT group had a better clinical outcomes and higher lifetime costs. The incremental cost per QALY gained was 99,548 baht. The acceptability curve showed that the probability of RI-HSCT being cost-effective was 64% at the willingness to pay of 1 time of Thai Gross domestic product per capita (GDP per capita), approximately US\$4210 per QALY gained. The most sensitive parameter is discounting rate. **CONCLUSIONS:** At a societal willingness to pay of 1 GDP per capita, RI-HSCT was a cost-effective and affordable treatment for adolescent and young adult with severe thalassemia in Thailand compared to BT-ICT.

#### PSY17

##### COST-UTILITY ANALYSIS OF IMMUNE TOLERANCE INDUCTION (ITI) THERAPY VERSUS ON-DEMAND TREATMENT WITH RECOMBINANT FVII (rFVIIA) FOR HEMOPHILIA A WITH HIGH TITER INHIBITORS IN IRAN

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**OBJECTIVES:** To assess the incremental cost-effectiveness ratios of Immune Tolerance Induction (ITI) therapy with plasma derived FVIII concentrates versus on-demand treatment with Recombinant FVIIa (rFVIIa) in hemophilia A with high titer inhibitors from Ministry of Health perspective of Iran. **METHODS:** This study was based on the study of Knight et al, which evaluated the cost-effectiveness ratios of different treatment for hemophilia A with high-responding inhibitors. To adapt Knight' Results to the Iranian context, a few clinical parameters were varied and cost data were replaced with the corresponding Iranian estimates of resource use. The time horizon of the analysis was 10 years. One-way sensitivity analyses were performed varying the cost of the clotting factor, the drug dose, and the administration frequency to test the robustness of the analysis. **RESULTS:** Comparison of the incremental cost-effectiveness ratios (ICERs) between the three ITI protocols and the On-Demand regimen with rFVIIa show that all three ITI protocols dominates On-Demand regimen with rFVIIa between ITI protocols the Low-Dose ITI protocol dominates both the Bonn ITI protocol and the Malmö ITI protocol, would also be preferred ITI protocol. All of three ITI protocols dominate the On-Demand strategy as they have both a lower average lifetime cost and higher QALYs gained. The cost per QALY gained for the Bonn ITI protocol compared with the Malmö ITI protocol was \$249,391.84. The cost per QALY gained for the Bonn ITI protocol compared with the Low-Dose ITI protocol was \$842,307.69. **CONCLUSIONS:** The results of data derived from our study suggest that The Low-Dose ITI protocol may be a less expensive and/or cost-effective option compared with on-demand first-line treatment with rFVIIa.

#### SYSTEMIC DISORDERS/CONDITIONS - Patient-Reported Outcomes & Patient Preference Studies

#### PSY18

##### THE FUTURE CHARACTERISTICS OF BYPASSING AGENTS IMPROVING HAEMOPHILIA INHIBITOR PATIENTS CARE FROM AN ECONOMIC AND HEALTH RELATED QUALITY OF LIFE PERSPECTIVE

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**OBJECTIVES:** Treatment for haemophilia inhibitor patients has improved substantially since the 1980's and 1990's. But from a health economic perspective, an unmet need persists for better treatment options in terms of health-related quality of life (HRQoL) and cost savings. Haemostatic products alone account for the biggest expense in the care of haemophilia patients. Congenital haemophilia with inhibitors involves lifelong treatment, and with it, substantial long-term costs and lowered HRQoL. **METHODS:** A systematic review on cost and HRQoL findings for haemophilia treatments in economic terms was conducted on more than 280 scientific studies. Fifty-five articles were retained for the execution of the project analysis. **RESULTS:** The analysis shows that to counteract costs to payers (society) and to improve patient outcomes, improved treatments could increase HRQoL. This could be achieved with FVIII and FIX bypassing agents that have: greater convenience through subcutaneous administration (less-painful injections, avoidance of infusions), faster onset through a fast-acting rFVIIa analogue (faster resolution of bleeding episodes leading to faster pain relief, sustained control, less dosing), and longer duration through a long-acting rFVIIa derivative (fewer injections and rebleeds, arthropathy prevention). **CONCLUSIONS:** Improved FVIII/IX bypassing agents for treatment of haemophilia patients with inhibitors would be a cost-effective option for society, improving HRQoL associated with the clinical condition.

#### PSY19

##### ACCESS TO CARE AND HEALTH OUTCOMES AMONG THE HEMOPHILIA A POPULATION IN DEVELOPING COUNTRIES: A COMPARISON BETWEEN PHILIPPINES AND COLOMBIA

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**OBJECTIVES:** There are large gaps in hemophilia treatment standards around the world. Among developing nations, disparities in care exist resulting in sub-optimal outcomes for patients in some countries. The objective of this analysis was to